

Notice of Allowability

Application No.

09/452,329

Examiner

Christian La Forgia

Applicant(s)

GRAUNKE ET AL.

Art Unit

2131

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 25 October 2004.
2. ☒ The allowed claim(s) is/are 22-41.
3. ☒ The drawings filed on 25 October 2004 and 04 March 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

CHRISTOPHER REVAH
PRIMARY EXAMINER



DETAILED ACTION

1. The response filed on 25 October 2004 is noted and made of record.
2. Claims 1-41 are presented for examination.
3. Claims 1-21 have been cancelled as per Applicant's request.

Drawings

4. The drawings were received on 25 October 2004. These drawings are acceptable.

Allowable Subject Matter

5. Claims 21-41 are allowed.
6. The following is an examiner's statement of reasons for allowance:

As per claim 22, it is well known in the art for an apparatus to produce a pseudo random sequence, comprising: a data bit generator to produce a principal data stream; multiple data bit generators to create additional data streams; a storage structure responsive to the additional data streams having multiple bit storage locations to store the bits of the principal data stream; and a shuffle unit coupled with the data bit generators to modify the principal data stream by combining the bits of the principal data stream with past bits of the principal data stream stored in the storage structure.

There are no teachings in the prior art of storing the principal data stream in the storage locations in a pseudo random order based on an order of bits in the additional data streams, wherein the additional data streams are the additional linear feedback shift registers as shown in Figure 3b and discussed on page 7 of the Specification (Emphasis added). Furthermore there is no teaching of combining the bits of the principal data stream with past bits of the principal data stream stored in the storage structure and pseudo randomly selected from the storage structure

based on an order of the bits in the additional data streams to produce a pseudo random sequence, wherein the additional data streams are the additional linear feedback shift registers as shown in Figure 3b and discussed on page 7 of the Specification (Emphasis added). Since no teachings or motivation can be found of the abovementioned limitations, claim 22 is therefore novel and non-obvious.

As per claim 29, it is well known for a method to generate a data stream, comprising: generating a first and a second bit sequence; storing bits from the first sequence in a memory structure; retrieving stored bits of the first sequence from the memory structure; bit-wise modifying the bits of the first sequence with the stochastically retrieved bits to produce a pseudo random data stream.

There is no teaching in the prior art of retrieving stored bits of the first sequence from the memory structure in a stochastic order, the order based at least in part on a bit order of the second sequence, wherein the second sequence is based on the additional linear feedback shift registers as shown in Figure 3b and discussed on page 7 of the Specification (Emphasis added). Since no teachings or motivation can be found of the abovementioned limitation, claim 29 is therefore novel and non-obvious.

As per claim 35, its is well known in the art for a stream cipher generator comprising: a first data bit generator to produce a first stream of data bits; a memory having a read and write port to receive and store bits from the first stream of data bits; a second data bit generator to produce a second stream of data bits; a read and write port controller coupled to the memory; and

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a combiner to receive the first stream of data bits and the bits read from the memory, and modify the first stream of data bits with the bits read from the memory to produce a pseudo random sequence.

There is no teaching in the prior art of a read and write port controller coupled to the memory and responsive to the second stream of data bits, to control the read and write functions of the memory based, at least in part, on the sequence of bits in the second stream of data bits, wherein the second sequence is based on the additional linear feedback shift registers as shown in Figure 3b and discussed on page 7 of the Specification (Emphasis added). Since no teachings or motivation can be found of the abovementioned limitation, claim 29 is therefore novel and non-obvious.

7. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christian La Forgia whose telephone number is (571) 272-3792. The examiner can normally be reached on Monday thru Thursday 7-5.

9. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Christian LaForgia
Patent Examiner
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Clf

CHRISTOPHER REVAK
PRIMARY EXAMINER

